

## PATENT ABSTRACTS OF JAPAN

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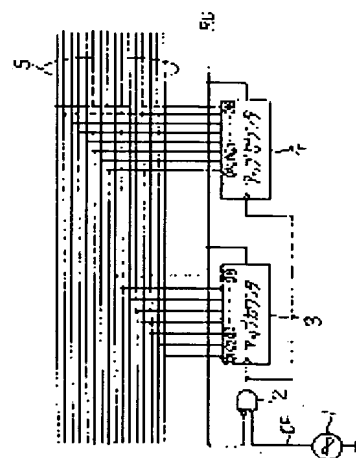
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## (54) RANDOM NUMBER GENERATOR

## (57)Abstract:

**PURPOSE:** To generate a random number at high speed by inputting an asynchronous pulse to at least two or more counters, and reading out the contents of the counter as a random number.

**CONSTITUTION:** An asynchronous clock pulse (CP) from an oscillator 1 is inputted to up-down counters (UC) 3, 4 through an AND gate 2. Counting circuits of the UCs 3, 4 are brought to count-up in accordance with this input CP. In this case, since the UCs 3 and 4 are not initialized, its contents become values having no relation to each other. When a read-out signal RD is supplied to the UCs 3, 4 when a random number is necessary, the UCs 3, 4 stop the count-up. In this case, as for the contents of the UCs 3, 4, each of them becomes the random number. In such a manner, the random number of the high speed and the high throughput can be realized in an IC with a small formed area.



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